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**MEMORANDUM**

**TO:** Legislative Oversight Commission on Education Accountability (LOCEA)  
**FROM:** Dr. Juliana Serafin, Senior Director Division of Science and Research, HEPC  
**DATE:** September 4, 2020  
**RE:** Research Challenge Fund Annual Report

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West Virginia Code §18B-1B-12 requires the West Virginia Higher Education Policy Commission to report to LOCEA annually on the results of the projects and activities funded by the Research Challenge Fund appropriation.

Since it was created in 2004, the Research Challenge Fund has been instrumental in helping West Virginia build its scientific research capacity and reputation by attracting and developing top university scientists. Through funding for undergraduate and graduate STEM students, the Research Challenge Fund also creates a highly skilled, culturally diverse workforce, leading to new economic possibilities for West Virginia. The Research Challenge Fund is evidence of the state's ongoing commitment to support science and technology research, education, and outreach.

The Research Challenge Fund relies on excess lottery proceeds. In Fiscal Year 2020, a total of \$1,731,820 was appropriated but the RCF received \$1,394,051 (a shortfall of \$337,769).

For Fiscal Year 2020 (July 2019-June 2020), the fund supported the following grant programs and services:

- **Research Challenge Grants** to support the creation of research centers and foster economic development and workforce advancement at West Virginia University and Marshall University (a total of \$1.3 M for each award allotted over 5 years)

For the period of 2018 – 2022, three Research Challenge Grants are funding research for:

- 1) Advancement of Science and Engineering for Localized Gas Utilization (WVU),
- 2) Foundation of the Vaccine Development Center at WVU (WVU)
- 3) Center for Cognitive Computing (C3): A Multidisciplinary Research Center for Excellence (WVU).

Please note that Project 1 supports research at Marshall University in addition to WVU. All three projects have already made excellent use of the state's investment, leveraging the initial investment into further grant funding from other sources, supporting scores of graduate students and postdoctoral fellows, and producing hundreds of publications on important research. Please see the detailed reports for each of the three projects which are combined into *Attachment 1: RCG FY'20 Summary Report*.

- **Summer/Semester Undergraduate Research Experience (SURE)** awards for undergraduate research stipends to fully or partially support approximately 95 students annually at WVU, Marshall, West Virginia State University, West Virginia Wesleyan College, Shepherd University and West Liberty University (\$300 K per year, three years 2020-2022)
- **Science, Technology, Engineering and Mathematics (STEM) Fellows** grants for approximately 20 PhD graduate students—8 at Marshall and 12 at WVU (\$600 K per year for four years 2017-2021)
- **Technical Assistance** provides an external expert peer review service for STEM faculty to help develop competitive proposals for funding from federal agencies. In FY'20, 21 faculty proposals were reviewed, 4 large scale proposals were aided in their development, and 40 proposals were reviewed for 7 special competitions. (\$150 K )
- **Opportunity Fund** provides small, one-time awards to assist faculty with expenses related to development of proposals for federal funding, and for summer student programs (\$39.5 K in 9 awards)
- **Innovation Grants** provides equipment, supplies and fund minor renovations of laboratory spaces for undergraduate education and research. Two awards were made to Shepherd and Concord (for a total of \$80 K).
- **Administration and Cost Share to NSF EPSCoR RII grant** (\$255 K)